

Appendix A References

A-1. Required Publications

Public Law 92-582

Public Law 92-582 (86 STAT. 1278), Public Buildings-
Selection of Architects and Engineers

EP 25-1-1

Index of Publications, Forms, and Reports

EM 1110-1-1000

Photogrammetric Mapping

EM 1110-1-1002

Survey Markers and Monumentation

EM 1110-1-1004

Deformation Monitoring and Control Surveying

EM 1110-2-1003

Hydrographic Surveying

¹CW 01332

Civil Works Construction Guide Specifications for Survey
Markers and Monumentation

¹CW 16701

Civil Works Construction Guide Specifications for Pro-
curement of NAVSTAR Global Positioning System (GPS)
and Related Instrumentation/Equipment

¹CW 16702

Civil Works Construction Guide Specifications for Pro-
curement of Real-Time Differential NAVSTAR Global
Positioning System (DGPS)

American Society for Photogrammetry and Remote Sensing 1989

American Society for Photogrammetry and Remote Sens-
ing. 1989. "ASPRS Accuracy Standards for Large-Scale
Maps," *Photogrammetric Engineering and Remote Sens-
ing*, 1068 and 1070.

¹Reference published by Department of Army and availa-
ble through USACE Command Information Management
Office sources.

A-2. Related Publications

Section I

Documents Available from NGS

The National Geodetic Survey (NGS) performs research
and development into precise positioning using GPS.
NGS publishes the following publications and papers
which discuss GPS and may be of help to the surveyor.
The surveyor can inquire about the availability of these
documents by contacting NOAA, National Geodetic Infor-
mation Center, 1315 East West Highway, Silver Spring,
MD, 20910.

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Bossler, J. D., and Challstrom, C. W. 1985. *GPS
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World Geodetic System 1984 - its definition and relation-
ships with local geodetic systems," DMA Technical
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and specifications for geodetic control networks*.
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accuracy standards and specifications for using GPS rela-
tive positioning techniques (Preliminary)*. Rockville, MD.

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uary-February). *GPS Bulletin*, Commission VIII, Interna-
tional Association of Geodesy/International Union of
Geodesy and Geophysics, 2.(1).

Goad 1985

Goad, C. C. 1985. *Precise relative position determina-
tion using global positioning system carrier phase meas-
urements in a nondifference mode*.

Hein 1985

Hein, G. W. 1985. "Orthometric height determination using GPS observations and the integrated adjustment model," NOAA Technical Report NOS 110 NGS-32, National Oceanic and Atmospheric Administration.

Hothem and Fronczek 1983

Hothem, L. D., and Fronczek, C. J. 1983. "Report on test and demonstration of macrometer model V-1000 interferometric surveyor," Federal Geodetic Control Committee.

Hothem and Williams 1985

Hothem, L. D., and Williams, G. E. 1985. *Factors to be considered in development of specifications for geodetic surveys using relative positioning GPS techniques.*

Hothem, Goad, and Remondi 1984

Hothem, L. D., Goad, C. C., and Remondi, B. W. 1984. *GPS satellite surveying - practical aspects.*

Kass and Dulaney 1986

Kass, W. G., and Dulaney, R. 1986. *Procedures for processing GPS phase observations at the National Geodetic Survey.*

Lucas and Mader 1988

Lucas, J. R., and Mader, G. L. 1988. *Recent advances in kinematic GPS photogrammetry.*

Mader 1986

Mader, G. L. 1986. *Decimeter precision aircraft positioning using GPS carrier phase.*

Mader and Abell 1985

Mader, G. L., and Abell, M. D. 1985. *A comparison between global positioning system and very long baseline interferometry surveys in Alaska and Canada.*

Milbert 1985a

Milbert, D. G. 1985a. *Application of the variance factor test to a global positioning system survey.*

Milbert 1985b

Milbert, D. G. 1985b. *Preliminary analysis of an operational global position system control survey.*

Milbert 1988

Milbert, D. G. 1988. *Network adjustment of correlated coordinate difference observations.*

Minke 1988

Minke, D. H. 1988. *Kinematic GPS land survey--description of operational test and results.*

National Geodetic Information Center 1989

National Geodetic Information Center. 1989 (revised). "Documents available on GPS," Information Flyer 86-1, National Oceanic and Atmospheric Administration.

National Geodetic Survey 1986

National Geodetic Survey. 1986. *Geodetic glossary.*

National Geodetic Survey 1988

National Geodetic Survey. 1988. *Guidelines for submitting GPS relative positioning data to the national geodetic survey,* Rockville, MD.

National Oceanic and Atmospheric Administration 1988

National Oceanic and Atmospheric Administration. 1988. *National Geodetic Survey state plane coordinate manual NAD 1983.*

Remondi 1984

Remondi, B. W. 1984. "Using the global positioning system (GPS) phase observable for relative geodesy: modeling, processing, and results," Ph.D diss., University of Texas.

Remondi 1985a

Remondi, B. W. 1985a. *Global positioning system carrier phase: description and use.*

Remondi 1985b

Remondi, B. W. 1985b. *Modeling the GPS carrier phase for geodetic applications.*

Remondi 1985c

Remondi, B. W. 1985c. "Performing centimeter-level surveys in seconds with GPS carrier phase: initial results," NOAA Technical Memorandum NOS NGS-43, National Oceanic and Atmospheric Administration.

Remondi 1986

Remondi, B. W. 1986. "Distribution of global positioning system ephemerides by the National Geodetic Survey." ACSM spring meeting, March 1986.

Remondi 1991

Remondi, B. W. 1991. "Kinematic GPS results without static initialization," NOAA Technical Memorandum NOS NGS-55.

Remondi 1992a

Remondi, B. W. 1992a. "Real-time centimeter-accuracy without static initialization." *Sixth International Geodetic Symposium on Satellite Positioning, Columbus, Ohio.*

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Remondi, B. W. 1992b. "Real-time centimeter-accuracy while in motion (warm start versus cold start)." *5th International Technical Meeting ION GPS-92, Albuquerque, New Mexico.*

Remondi and Hofmann-Wellenhof 1989

Remondi, B. W., and Hofmann-Wellenhof, B. 1989. *Accuracy of global positioning system broadcast orbits from relative surveys.*

Snay 1986

Snay R. A. 1986. *Network design strategies applicable to GPS surveys using three or four receivers.*

Soler and Hothem 1988

Soler, T., and Hothem, L. 1988. "Coordinate systems used in geodesy - basic definitions and concepts," *Journal on Surveying and Engineering, American Society of Civil Engineers.*

Soler, Hothem, and Fury 1986

Soler, T., Hothem, L. D., and Fury, R. J. 1986. *Precise geodetic surveying with code and carrier phase tracking GPS receivers.*

Stenn 1989

Stenn, James E. 1989. "The State Plane Coordinate System of 1983," NOAA Manual NOS NGS 5, National Oceanic and Atmospheric Administration.

Strange 1985

Strange, W. E. 1985. *High-precision three-dimensional differential positioning using GPS.*

Zilkoski 1990a

Zilkoski, David B. 1990a. "Establishing vertical control using GPS satellite surveys." *Proceedings of the 19th International Federation of Surveying Congress. National Geodetic Survey.*

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Zilkoski, David B. 1990b. "Minimum steps required when estimating GPS-derived orthometric heights." *Proceedings of the Fall GIS/LIS 1990 Convention.*

Zilkoski and Hothem 1989

Zilkoski, David B., and Hothem, Larry D. 1989. "GPS satellite surveys and vertical control," *Journal of Surveying Engineering.*

Section II

Other Sources

There are also several books and relatively inexpensive publications published by companies and agencies other than NOAA that may be used as general reference sources on GPS:

Burkhard, Richard K., et al. 1983. "Geodesy for the Layman," Defense Mapping Agency (DMA). Available from DMA, Aerospace Center, St. Louis AFS, MO 63118. This text presents the basic principles of geodesy in an elementary form. The formation of geodetic datums is introduced, and the necessity of connecting or joining datums is discussed. Methods used to connect independent geodetic systems to a single world reference system are discussed including the role of gravity data. There is also a discussion of satellite and related technological applications to geodesy and the World Geodetic System.

Canadian GPS Associates. 1987. "Guide to GPS Positioning," Fredericton, New Brunswick, Canada. Available from L. Hothem, 7563 Spring Lake Drive, Bethesda, MD 20817, U.S. \$35.00 each (includes ONLY 4th class postage to U.S. addresses). This text is primarily an introduction of the basic concepts of GPS, rather than an explanation of the details of the latest research results. Subjects covered include a simplified description of GPS, GPS data collection and processing, applications, as well as GPS receivers.

Leick and Lambert 1990

Leick, Alfred, and Lambert, Steven. 1990. *GPS satellite surveying.* John Wiley, New York.

Mikhail and Ackermann 1976

Mikhail, Edward M., and Ackermann, Friedrich E. 1976. *Observations and least-squares.* IEP Series in Civil Engineering, New York.

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Photogrammetry for Highways Committee 1968

Photogrammetry for Highways Committee. 1968. "Reference guide outline: specifications for aerial surveys and mapping by photogrammetric methods for highways," U.S. Department of Transportation, Washington, DC.

Scherrer, Rene 1985. "The WM GPS primer." Available from Geodesy Marketing, Wild Heerbrugg Instruments, Inc., 40 Technology Park/Atlanta, Norcross, GA 30092. Telephone: 800-FOR-WILD. Single copy cost: Free. This text details basic information on GPS satellite surveying, highlighting the WM101 receiver and its post-processing software, PoPS.

Trimble Navigation, Ltd., 1989, 1991, 1992

"GPS: A guide to the next utility," 1989, "GPS: field surveyor's guide, a field guidebook to static surveying," 1991, and "GPS: field surveyor's guide, a field guidebook for dynamic surveying," 1992. Available from Trimble Navigation, Ltd., 645 North Mary Avenue, Sunnyvale, CA 94088-3642. Telephone: (408) 730-2900. A fine basic overview of GPS, its operation, and processing detail.